Please add the following claims.

18. A method for topographic genotyping comprising the steps of:

placing a biological specimen having DNA of a patient under a microscope;

inspecting the biological specimen microscopically with the microscope;

choosing a microscopic sized target on the biological specimen based on its histopathologic characteristics;

separating the target from the specimen;

extracting DNA from the target;

centrifuging the resultant material to create a pellet and a DNA-containing supernatant;

removing the supernatant so that the DNA sequences therein can be amplified;

amplifying the DNA sequences; and

detecting mutations in the DNA sequences.

19. A method according to Claim 18 wherein the biological specimen is a biological specimen of fixative treated tissue.

20. A method according to Claim 18 wherein the biological specimen is a tissue section, cytological fluid, filter or cellular specimen.

21. A method according to Claim 18 wherein the specimen is a tissue section and the separating step includes steps of slicing the target from the section and placing the target on a glass slide.

22. A method according to Claim 18 wherein the specimen is a tissue section and the separating step includes a step of placing the target in a tube.

23. A method according to Claim 18 wherein the separating step includes steps of cutting an arc segment from the specimen and placing the segment in a tube.

24. A method according to Claim 18 wherein the extracting step includes the step of placing the target in a lysis buffer.

25. A method according to Claim 24 wherein the extracting step further includes a step of contacting the target with proteinase K.

26. A method according to Claim 24 wherein after the step of placing the target in a lysis buffer, there is a step of adding phenol and chloroform into the lysis buffer with the target.

27. A method according to Claim 26 wherein after the adding step, there is a step of separating short length fragments of DNA, being less than 100 base pairs in length, from the target.

28. A method according to Claim 18 wherein the amplifying step includes steps of:

choosing a primer corresponding to a gene of the patient;

adding the primer to the DNA sequences; and

performing polymerase chain reaction on the DNA sequences with primer.

29. A method according to Claim 18 wherein the detecting step includes a step of determining the DNA sequence.

30. A method according to Claim 29 wherein after the determining step, there is a step of comparing the DNA sequence with known DNA sequences for corresponding DNA regions of the target.

31. A method according to Claim 18 wherein after the detecting step, there is a step of establishing whether the DNA sequence is associated with a cancer.

32. A method according to Claim 18 wherein after the detecting step, there is a step of establishing whether the DNA sequence is associated with a condition hazardous to the health of the patient.

33. A method according to Claim 18 wherein the amplifying step comprises cycling the DNA sequences in a polymerase chain reaction machine, with each cycle comprising heating them to a temperature no greater than 99°C, and then back to a temperature of 55°C in 5 minutes.

34. A method according to Claim 33 wherein the separating step includes a step of cutting one to three 2-6μm thick histologic sections from the specimen.

35. A method according to Claim 32 wherein the biological specimen comprises human tissue.